

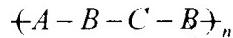
IN THE CLAIMS-

To facilitate entry of the following changes, the Applicants have also submitted herewith substitute pages providing all the pending claims, as they now stand.

Delete claims 17-33 and substitute therefor the following claims:

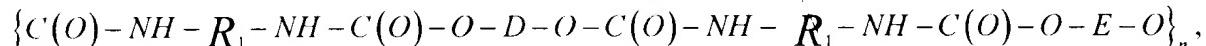
1     --34. A biomedical biocompatible polyurethane based on  
2       (i) a diisocyanate linked polyester polymer component and  
3       (ii) a diol component, said diol component having a uniform  
4       block-length, the polymer being biodegradable.

1     35. The biomedical biocompatible polyurethane according to  
2       claim 34, having the formula:



5  
6       wherein the term B denotes a diisocyanate moiety, the term A  
7       denotes a polyester moiety, the term C denotes a diol moiety  
8       and n is the number of recurring units.

1     36. A biomedical biocompatible polyurethane according to  
2       claim 34 consisting of repeating units of the following  
3       formula:



6  
7       wherein R<sub>1</sub> is an n-butylene moiety, D is a polyester  
8       moiety, E is selected from the group consisting of an

9       ethylene glycol-based moiety, an n-butylene glycol-based  
10      moiety, an n-hexylene glycol-based moiety and a diethylene  
11      glycol-based moiety and n indicates the number of repeating  
12      units.

1       37. A biomedical biocompatible polyurethane according to  
2      claim 36, wherein E is selected from the group consisting of  
3      ethylene, n-butylene, n-hexylene, -CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>- and  
4      -KYX-, wherein X is selected from the group consisting of an  
5      ethylene glycol-based moiety, an n-butylene glycol-based  
6      moiety, an n-hexylene glycol-based moiety and a diethylene  
7      glycol-based moiety and Y is a 1,4 butane diisocyanate-based  
8      moiety resulting from the reaction of 1,4 butane  
9      diisocyanate with a diol selected from the group consisting  
10     of ethylene glycol, n-butylene glycol, n-hexylene glycol and  
11     diethylene glycol, with the mole ratio of  
12     glycol:diisocyanate being 2:1..

1       38. A biomedical biocompatible polyurethane according to  
2      claim 34, wherein the block-length is the same for at  
3      least 90% of the diol units.

1       39. A biomedical biocompatible polyurethane according to  
2      claim 34, wherein the polyester is based on a polyester  
3      prepared by ring opening polymerization.

1       40. A biomedical biocompatible polyurethane according to  
2      claim 39, wherein the polyester is a random copolyester and  
3      is a copolyester having at least two of a moiety selected  
4      from the group consisting of lactide, glycolide,  
5      trimethylene carbonate and  $\epsilon$ -caprolactone.

1       41. A biomedical biocompatible polyurethane according to  
2       claim 34, wherein the polyester is based on (i) at least one  
3       carboxylic acid selected from the group consisting of  
4       lactic acid and succinic acid and (ii) at least one diol  
5       selected from the group consisting of ethylene glycol,  
6       1,4 butanediol, 1,6 hexanediol and diethylene glycol.

1       42. A biomedical biocompatible polyurethane according to  
2       claim 34 produced according to a process comprising the  
3       steps of (i) reacting the polyester with an isocyanate  
4       end-capped diol component in order to form a prepolymer, the  
5       ratio of isocyanate end-groups to polyester end-groups being  
6       at least 2:1, and then (ii) reacting the resulting  
7       prepolymer with water.

1       43. A biomedical biocompatible polyurethane according to  
2       claim 42, based on a copolyester of lactide and  
3       ε-caprolactone containing 5 to 95% of units of lactide and 5  
4       to 95% of units of ε-caprolactone, based on number.

1       44. A reaction product having the formula -XYX- and having  
2       a uniform block-length produced according to the process  
3       comprising the step of reacting a diol selected from the  
4       group consisting of 1,6-hexane diol and diethyleneglycol  
5       with 1,4 butane diisocyanate wherein the mole ratio of  
6       diol:diisocyanate is 2:1 and wherein X is the diol-based  
7       component and Y is the 1,4 butane diisocyanate-based  
8       component.

1       45. A process for the preparation of a biomedical  
2       biocompatible polyurethane defined according to claim 34,  
3       comprising the steps of (i) reacting at least 2 moles of a

4 diisocyanate with 1 mole of a polyester to form a first  
5 reaction product and (ii) reacting a diol selected from the  
6 group consisting of 1,4 butanediol, 1,6 hexane diol and  
7 diethyleneglycol with said first reaction product.

1 46. A process for the preparation of a biomedical  
2 biocompatible polyurethane defined according to claim 34  
3 comprising the steps of (i) reacting at least two moles of a  
4 diisocyanate with one mole of a diol selected from the group  
5 consisting of 1,4 butanediol, 1,6 hexane diol and  
6 diethyleneglycol to form a first reaction product and  
7 (ii) reacting a polyester which is a random copolymer with  
8 said first reaction product. )

1 47. An implant constructed from at least one biomedical  
2 biocompatible polyurethane defined according to claim 34,  
3 having a porosity of 50 to 99 vol. %

1 48. A method for reconstruction of at least one meniscal  
2 lesion comprising the step of effecting an adhesive implant  
3 to meniscal tissue having at least one of said lesions of a  
4 meniscus-reconstructing quantity at a  
5 meniscus-reconstructing rate of at least one polyurethane  
6 defined according to claim 34 for a fibrocartilage induction  
7 time of from 10 up to 30 weeks.

1 49. A biomedical biocompatible polyurethane having a phase  
2 separated morphology, comprising (i) soft segments selected  
3 from the group consisting of (a) polyester components,  
4 (b) polyether components and (c) polyester-polyether  
5 components and (ii) hard segments, said hard segments  
6 consisting of diol components having a uniform block-length,

7 and wherein (A) the diol component and (B) at least one of  
8 the polyester, the polyether or the polyester-polyether  
9 components have been linked to a diisocyanate component by  
10 means of reaction thereof with a diisocyanate.

1 50. A biomedical biocompatible polyurethane according to  
2 claim 38, wherein the block-length is the same for at  
3 least 98% of the diol units.

1 51. A biomedical biocompatible polyurethane according to  
2 claim 39, wherein the polyester is based on a random  
3 copolyester.

1 52. A biomedical biocompatible polyurethane according to  
2 claim 43, comprising from 40 up to 60% of units of lactide,  
3 based on number.

1 53. A biomedical biocompatible polyurethane according to  
2 claim 43, comprising from 40 up to 60% of units of  
3 ε-caprolactone, based on number.

1 54. A biomedical biocompatible polyurethane according to  
2 claim 49, wherein the diisocyanate is an aliphatic  
3 diisocyanate.

1 55. A biomedical biocompatible polyurethane according to  
2 claim 34 wherein the diisocyanate-linked polyester component  
3 is a 1,4 butane diisocyanate-linked polyester component.

1 56. A reaction product having a formula selected from the  
2 group consisting of YXY and YXYXY and having a uniform block  
3 length produced according to a process comprising the steps

4       of reacting a diol selected from the group consisting of 1,4  
5       butanediol, 1,6 hexanediol, diethylene glycol and ethylene  
6       glycol with 1,4 butane diisocyanate wherein X is the  
7       diol-based component and Y is the 1,4 butane  
8       diisocyanate-based component.

1       57. A biomedical biocompatible polyurethane according to  
2       claim 36, wherein E is an -YXY- or -YXYXY- reaction product  
3       component of diol (X) and 1,4 butane diisocyanate (Y).

1       58. A pre-polymer having the structure:



3       wherein D is a polyester component and E is selected from  
4       the group consisting of ethylene, n-butylene, n-hexylene,  
5       -CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>- and -XYX-, wherein X is selected from the  
6       group consisting of an ethylene glycol-based moiety,  
7       an n-butylene glycol-based moiety, an n-hexylene  
8       glycol-based moiety and a diethylene glycol-based moiety  
9       and Y is a 1,4 butane diisocyanate-based moiety resulting  
10      from the reaction of 1,4 butane diisocyanate with a diol  
11      selected from the group consisting of ethylene glycol,  
12      n-butylene glycol, n-hexylene glycol and diethylene glycol.

1       59. A process for preparing a urethane polymer comprising  
2       the steps of:

- 3       i. admixing equimolar quantities of L-lactide and  
4       ε-caprolactone in the presence of a stannous octoate  
5       catalyst and a butanediol initiator thereby forming an  
6       L-lactide- ε-caprolactone prepolymer;
- 7       ii. admixing butanediol with a six-fold excess of butane  
8       diisocyanate thereby forming an isocyanate-terminated  
9       urethane block;

- 10       iii. dissolving the L-lactide- ε-caprolactone prepolymer in  
11       dimethyl sulfoxide to form a first solution;  
12       iv. dissolving the isocyanate-terminated block in dimethyl  
13       sulfoxide to form a second solution;  
14       v. admixing the first solution with the second solution  
15       to form a polyurethane reaction mass;  
16       vi. recovering the resulting urethane polymer from the  
17       reaction mass.

- 1       60. A process for preparing a urethane polymer comprising  
2       the steps of:  
3       i. admixing equimolar quantities of L-lactide and  
4       ε-caprolactone in the presence of a stannous octoate  
5       catalyst and a butanediol initiator thereby forming a  
6       L-lactide- ε-caprolactone prepolymer;  
7       ii. admixing butane diisocyanate with a six-fold excess of  
8       butanediol thereby forming an hydroxyl-terminated  
9       urethane block;  
10      iii. dissolving the L-lactide- ε-caprolactone prepolymer in  
11       dimethyl sulfoxide to form a first solution;  
12      iv. dissolving the hydroxyl-terminated block in dimethyl  
13       sulfoxide to form a second solution;  
14      v. admixing the first solution with the second solution  
15       to form a polyurethane reaction mass; \  
16      vi. recovering the resulting urethane polymer from the  
17       reaction mass. --.

REMARKS

If the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, the Examiner